

of packaged Drinking Water, wherein the limits for Pesticide Residues has been prescribed. Water comprises approximately 88% of most carbonated drinks.

The analysis of the informal samples of carbonated water were collected by the State Governments as per the direction of the Ministry of Health and Family Welfare during August-September, 2006, and were analysed by the Central Food Laboratories for pesticide residues. As per the analysis reports, none of the samples exceeded the permissible limits prescribed for pesticides residues in Packaged Drinking Water.

The Bureau of Indian Standards (BIS) has also set standards for carbonated beverages (IS 2346) which are under review. The BIS standards are, however, voluntary. Under the PFA Rules, 1955, carbonated drinks are not required to be sold under mandatory BIS Certification Mark.

The Ministry of Health and Family Welfare has constituted a National Expert Committee to guide the Pesticide Residues Sub-Committee in fixation of MRLs of pesticides in carbonated beverages, fruit and vegetable juices and other finished products.

States/UT Governments, who are the implementing authorities under the PFA Act have been advised to ensure regular sampling and testing of soft drinks to ensure that quality standards are maintained.

### **Vaccine for Dengue and Chikungunya**

**\*146. SHRIMATI MAYA SINGH:  
SHRI SURENDRA LATH:**

Will the Minister of HEALTH AND FAMILY WELFARE be pleased to state:

(a) whether it is a fact that Dengue and Chikungunya/Malaria is becoming an epidemic in the country;

(b) if so, whether Government are going to invent any vaccine for preventing these disease;

(c) whether Government have conducted any research in this regard; and

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†Original notice of the question was received in Hindi.

(d) if so, the present status in this regard?

**THE MINISTER OF HEALTH AND FAMILY WELFARE (DR. ANBUMANI RAMDOSS):** (a) Dengue and Chikungunya are viral diseases transmitted by vector mosquito *Aedes aegypti*, while malaria is a parasitic disease and transmitted by *Anopheles* vector mosquitoes. Dengue and Malaria are endemic and occur every year with the upsurge during the monsoon and post monsoon months when there is a build up of vector mosquito density. Chikungunya fever, on the other hand, has been reported in the country in the year 2006 after a long period on a wide spread basis, therefore, it is an epidemic outbreak.

State-wise Malaria Cases and Deaths are given in Statement-I (See below).

State-wise Chikungunya Cases and Deaths are given in Statement-II (See below).

State-wise Dengue Cases and Deaths are given in Statement-III (See below).

(b) to (d) At present, there is no vaccine or cure available for alleviation of these diseases.

Information regarding various vaccine trials abroad for Dengue is given in Statement-IV (See below).

There is no vaccine available for prevention of Chikungunya so far.

The National Institute of Malaria Research (NIMR) of Indian Council of Medical Research (ICMR) is conducting research on malaria vaccine at Rourkela, Orissa (initiated in 2002) in collaboration with International Centre for Genetic Engineering and Biotechnology (ICGEB) & Department of Biotechnology (DBT) and with collaboration of ICMR & Centres for Disease Control and Prevention (CDC) Atlanta, at Jabalpur, MP (initiated in 2005). NIMR is generating baseline epidemiological data required for testing the vaccine in population while the ICGEB & CDC are developing the products. The candidates vaccine for trial in Orissa is recombinant peptide against blood stages of *P. falciparum* while the CDC vaccine is also recombinant peptide but against multiple stages of *P. falciparum*.

**Statement-I**

**State-wise Malaria cases and Deaths since 2003**

| States/UT         | 2003          |        | 2004          |        | 2005          |        | 2006*         |        |
|-------------------|---------------|--------|---------------|--------|---------------|--------|---------------|--------|
|                   | Malaria cases | Deaths | Malaria cases | Deaths | Malaria cases | Deaths | Malaria cases | Deaths |
| 1                 | 2             | 3      | 4             | 5      | 6             | 7      | 8             | 9      |
| Andhra Pradesh    | 35995         | 3      | 35427         | 2      | 39099         | 0      | 21093         | 0      |
| Arunachal Pradesh | 34810         | 0      | 29849         | 0      | 31215         | 0      | 5124          | 0      |
| Assam             | 76570         | 53     | 58134         | 54     | 67885         | 113    | 94592         | 294    |
| Bihar             | 2652          | 1      | 1872          | 0      | 2733          | 1      | 1426          | 0      |
| Chhattisgarh      | 194419        | 4      | 194256        | 4      | 187950        | 3      | 30188         | 0      |
| Goa               | 11370         | 1      | 7839          | 7      | 3747          | 1      | 3345          | 4      |
| Gujarat           | 130744        | 65     | 222759        | 89     | 179023        | 54     | 63573         | 0      |
| Haryana           | 4374          | 0      | 10064         | 0      | 33262         | 0      | 42991         | 0      |
| Himachal Pradesh  | 133           | 0      | 126           | 0      | 129           | 0      | 84            | 0      |
| Jammu & Kashmir   | 320           | 0      | 250           | 0      | 268           | 0      | 132           | 0      |
| Jharkhand         | 118902        | 13     | 143722        | 40     | 193144        | 21     | 127783        | 4      |
| Karnataka         | 100220        | 22     | 80961         | 27     | 83181         | 26     | 44375         | 20     |
| Kerala            | 2575          | 7      | 2790          | 12     | 2554          | 6      | 365           | 1      |
| Madhya Pradesh    | 99708         | 22     | 132094        | 36     | 104317        | 44     | 50279         | 0      |
| Maharashtra       | 62947         | 85     | 68988         | 61     | 47608         | 104    | 35283         | 91     |
| Manipur           | 2589          | 17     | 2736          | 8      | 1844          | 3      | 1559          | 1      |
| Meghalaya         | 18366         | 38     | 18080         | 29     | 16816         | 41     | 18760         | 59     |
| Mizoram           | 7293          | 48     | 7830          | 72     | 10741         | 74     | 7957          | 105    |
| Nagaland          | 3370          | 0      | 2436          | 1      | 2987          | 0      | 2987          | 9      |
| Orissa            | 421323        | 333    | 416732        | 283    | 396573        | 255    | 191544        | 115    |
| Punjab            | 379           | 1      | 1643          | 0      | 1883          | 0      | 1012          | 0      |
| Rajasthan         | 142738        | 66     | 105022        | 20     | 52286         | 22     | 18644         | 0      |
| Sikkim            | 278           | 0      | 160           | 3      | 69            | 0      | 81            | 0      |
| Tamil Nadu        | 43604         | 0      | 41732         | 0      | 39678         | 0      | 14723         | 0      |
| Tripura           | 13807         | 13     | 17453         | 16     | 18008         | 20     | 19690         | 25     |

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| 1               | 2       | 3    | 4       | 5   | 6       | 7   | 8      | 9   |
|-----------------|---------|------|---------|-----|---------|-----|--------|-----|
| Tripura         | 13807   | 13   | 17453   | 16  | 18008   | 20  | 19690  | 25  |
| Uttaranchal     | 2350    | 0    | 1255    | 0   | 1242    | 0   | 904    | 0   |
| Uttar Pradesh   | 101411  | 0    | 87022   | 0   | 105303  | 0   | 33295  | 0   |
| West Bengal     | 233802  | 214  | 220871  | 184 | 185964  | 175 | 48772  | 91  |
| A.N. Islands    | 753     | 0    | 745     | 1   | 3954    | 0   | 2046   | 0   |
| Chandigarh      | 84      | 0    | 199     | 0   | 432     | 0   | 377    | 0   |
| D & N Haveli    | 468     | 0    | 787     | 0   | 1166    | 0   | 1595   | 0   |
| Daman & Diu     | 141     | 0    | 118     | 0   | 104     | 0   | 109    | 0   |
| Delhi           | 839     | 0    | 1316    | 0   | 1133    | 0   | 427    | 0   |
| Lakshadweep     | 6       | 0    | 2       | 0   | 0       | 0   | 0      | 0   |
| Pondicherry     | 63      | 0    | 43      | 0   | 44      | 0   | 32     | 0   |
| ALL INDIA TOTAL | 1869403 | 1006 | 1915363 | 949 | 1816342 | 963 | 885147 | 819 |

\*Provisional up to 17.11.2006

**Statement-II**

*State-wise Status of Chikungunya Fever in India, 2006 (up to 28.11.2006)*

| State          | No. of districts affected | Total fever cases/ Suspected Chikungunya fever cases | No. of samples sent to NIV/NICD | No. of confirmed cases | No. of deaths |
|----------------|---------------------------|--|---------------------------------|------------------------|---------------|
| 1              | 2                         | 3  | 4                               | 5                      | 6             |
| Andhra Pradesh | 23                        | 77535  | 1224                            | 248                    | 0             |
| Karnataka      | 27                        | 762017   | 4994                            | 298                    | 0             |
| Maharashtra    | 34                        | 268321   | 5421                            | 719                    | 0             |
| Tamil Nadu     | 35                        | 64292  | 648                             | 116                    | 0             |
| Madhya Pradesh | 21                        | 59981  | 892                             | 70                     | 0             |
| Gujarat        | 25                        | 74770  | 1082                            | 185                    | 0             |

| 1             | 2          | 3              | 4            | 5           | 6        |
|---------------|------------|----------------|--------------|-------------|----------|
| Kerala        | 14         | 69225          | 235          | 38          | 0        |
| A & N Islands | 2          | 4469           | 0            | 0           | 0        |
| GNCT of Delhi | 12         | 514            | 514          | 56          | 0        |
| Rajasthan     | 1          | 102            | 44           | 24          | 0        |
| Pondicherry   | 1          | 542            | 52           | 9           | 0        |
| Goa           | 2          | 287            | 75           | 2           | 0        |
| <b>TOTAL</b>  | <b>197</b> | <b>1382055</b> | <b>15181</b> | <b>1765</b> | <b>0</b> |

**Statement-III**

*State-wise dengue cases & deaths (As on 28/11/2006)*

| Sl. No. | State          | 2003 |    | 2004 |    | 2005 |    | 2006<br>(upto 28 Nov.) |    |
|---------|----------------|------|----|------|----|------|----|------------------------|----|
|         |                | C    | D  | C    | D  | C    | D  | C                      | D  |
| 1       | 2              | 3    | 4  | 5    | 6  | 7    | 8  | 9                      | 10 |
| 1.      | Andhra Pradesh | 95   | 5  | 230  | 1  | 99   | 2  | 154                    | 17 |
| 2.      | Chandigarh     | 0    | 0  | 0    | 0  | 2    | 0  | 168                    | 0  |
| 3.      | Delhi          | 2882 | 35 | 606  | 3  | 1023 | 9  | 3302                   | 65 |
| 4.      | Goa            | 12   | 2  | 3    | 0  | 1    | 0  | 0                      | 0  |
| 5.      | Gujarat        | 249  | 9  | 117  | 4  | 454  | 11 | 503                    | 3  |
| 6.      | Haryana        | 95   | 4  | 25   | 0  | 183  | 1  | 450                    | 2  |
| 7.      | J & K          | 0    | 0  | 0    | 0  | 0    | 0  | 24                     | 0  |
| 8.      | Karnataka      | 1226 | 7  | 291  | 2  | 587  | 17 | 98                     | 7  |
| 9.      | Kerala         | 3546 | 68 | 686  | 8  | 1028 | 8  | 880                    | 5  |
| 10.     | Maharashtra    | 772  | 45 | 856  | 22 | 349  | 56 | 596                    | 20 |
| 11.     | Sikkim         | 0    | 0  | 12   | 0  | 0    | 0  | 0                      | 0  |
| 12.     | Punjab         | 848  | 13 | 52   | 0  | 251  | 2  | 1118                   | 6  |

| 1     | 2              | 3     | 4   | 5    | 6  | 7     | 8   | 9     | 10  |
|-------|----------------|-------|-----|------|----|-------|-----|-------|-----|
| 13.   | Rajasthan      | 685   | 11  | 207  | 5  | 370   | 5   | 1224  | 17  |
| 14.   | Tamil Nadu     | 1600  | 8   | 1027 | 0  | 1142  | 8   | 328   | 2   |
| 15.   | Pondicherry    | 6     | 0   | 0    | 0  | 0     | 0   | 0     | 0   |
| 16.   | Uttar Pradesh  | 738   | 8   | 8    | 0  | 121   | 4   | 637   | 14  |
| 17.   | D&N Haveli     | 0     | 0   | 1    | 0  | 0     | 0   | 0     | 0   |
| 18.   | West Bengal    | 0     | 0   | 32   | 0  | 6375  | 34  | 1021  | 8   |
| 19.   | Madhya Pradesh | 0     | 0   | 0    | 0  | 0     | 0   | 7     | 0   |
| TOTAL |                | 12754 | 215 | 1153 | 45 | 11985 | 157 | 10510 | 166 |

C=Cases, D=Deaths

38 Deaths from Dengue confirmed in Delhi & NCR and 27 Suspected Deaths from Dengue reported (7 from Delhi and 20 from others States)-Confirmation report still awaited.

(\*13 suspected deaths have not been confirmed by the MCD Board, thereby, deleted.)

#### Statement-IV

*Information regarding various vaccine trials abroad for dengue*

| Developers/Vaccine Candidates                                  | Manufacturers     | Stages                              |
|--|-------------------|-------------------------------------|
| Mahidol Univ./live attenuated, tetravalent<br>Aventis Phase II | Aventis           | Phase II<br>Preparing for Phase III |
| Walter Reed/live attenuated, Tetravalent                       | Glaxo Smith Kline | Phase I                             |
| Acambis/YF-Dengue Chimeric, tetravalent                        | Acambis/Aventis   | Phase I                             |
| NIH/5' deletions, Recombinant dengue 4                         | NIH               | Phase I                             |
| CDC-Mahidol/Dengue 2 chimeric                                  | dengue-Aventis    | Aventis<br>Monkey Testing           |